NEW ECODESIGN LEGISLATION FOR FANS

Lyon, AMCA European Region Meeting

DG Energy Unit C3
Energy efficiency of products & Intelligent Energy - Europe
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Energy efficiency in the EU

Disclaimer:

This presentation describes the situation as it is on 15 April 2010. Work on various legislative initiatives is ongoing and approaches may be subject to modifications. Due to the various recasts of legislative measures and the coming into force of the Lisbon Treaty certain descriptions may change in the near future, notably procedural ones.

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Energy efficiency policy - main instruments include:

- **Ecodesign Directive** 2009/125/EC (former 2005/32/EC)
- **Energy Labelling Directive** 92/75/EEC

  (Commission proposal for recast of 13.11.2008, currently in EP and Council, trilogue compromise reached)
- **Energy Star** programme for office equipment
- **Ecolabel Regulation** (EC) No 1980/2000 (voluntary endorsement label for top performers)
- Energy performance of **Buildings Directive** 2002/91/EC

  (Commission proposal for recast of 13.11.2008, currently in EP and Council)
- **End use energy efficiency and energy services directive** 2006/32/EC
- **CHP Directive** 2004/8/EC

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Other non-legislative instruments include:

- **Intelligent Energy Europe Programme** (2007-2013)
- **Covenant of mayors**

And of course

- **Structural funds**
- **Research projects**

An Energy Action Plan is in preparation, with an integrated Energy Efficiency Action Plan.

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Example of policy making: the energy efficiency of products

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The Energy efficiency of products is enshrined in a broader integrated approach

Integrated product policy:

- The **production phase** is addressed by the **RoHs Directive 2002/95/EC** on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment
- The **use phase** is addressed by the **Ecodesign Directive** and by the **Energy Labelling Directive**
- The **end-of-life phase** is addressed in the Waste Electrical and Electronic Equipment Directive 2002/96/EC (the WEEE Directive)

à Life cycle analysis performed on a number of energy using products show that most environmental impact occurs during **the use phase.**

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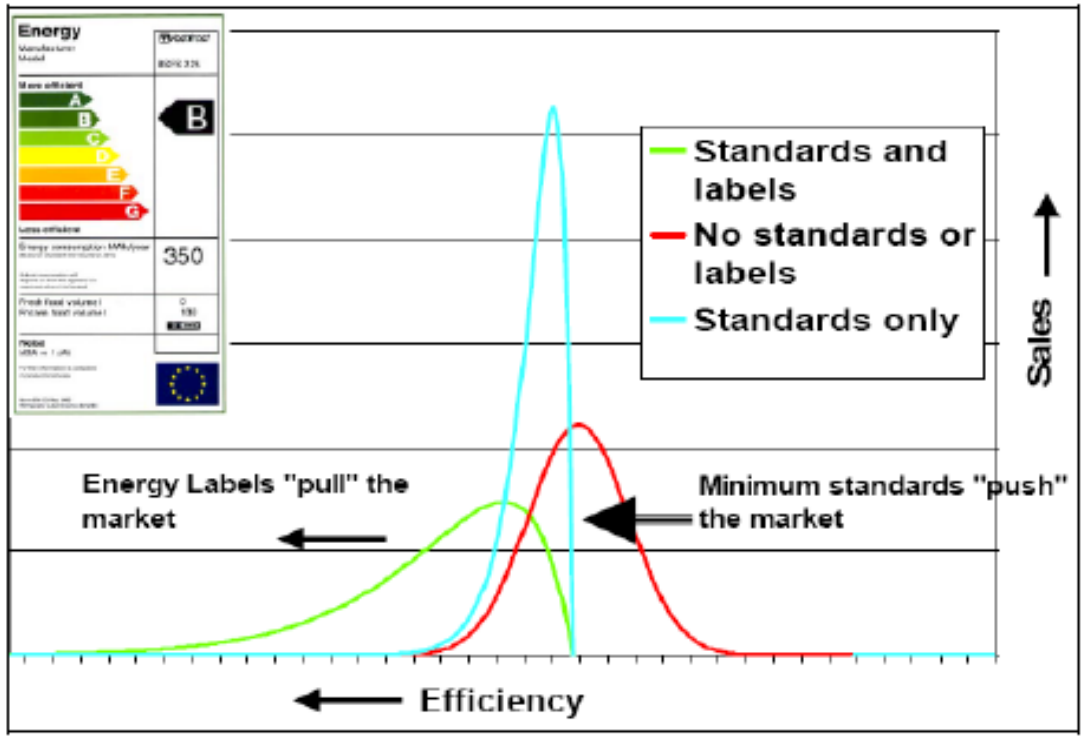
The use phase: Interaction between the Ecodesign and the Energy Labelling Directives

The Ecodesign Directive addresses the **supply side** while
the Energy Labelling Directive addresses the **demand side**.
It is the **combined** effect of both measures which ensures a dynamic improvement of the market.



Source: IEA, P. Waide, International use of policy instruments, Copenhagen, 05 April 2006

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The Ecodesign Directive 2009/125/EC

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The Ecodesign Directive 2009/125/EC

- The EU's main legal instrument to improve the environmental performance of **energy-related products**
  - » Extension of the scope of past Ecodesign Directive 2005/32/EC (energy-using products)
  - » Exemption for the automotive sector regulated in the type-approval legislation

- **Framework Directive** à requirements are introduced on a product-by-product basis via:
  - » **Implementing measures** (IM) to be adopted by the Commission, or
  - » **Voluntary agreements**

- Implementing measures only for products with:
  - » Significant environmental aspects
  - » Significant potential for improvement
  - » Significant trade and sales volume (indicative threshold: 200 000 units per year)

- Based on **Life-cycle approach**

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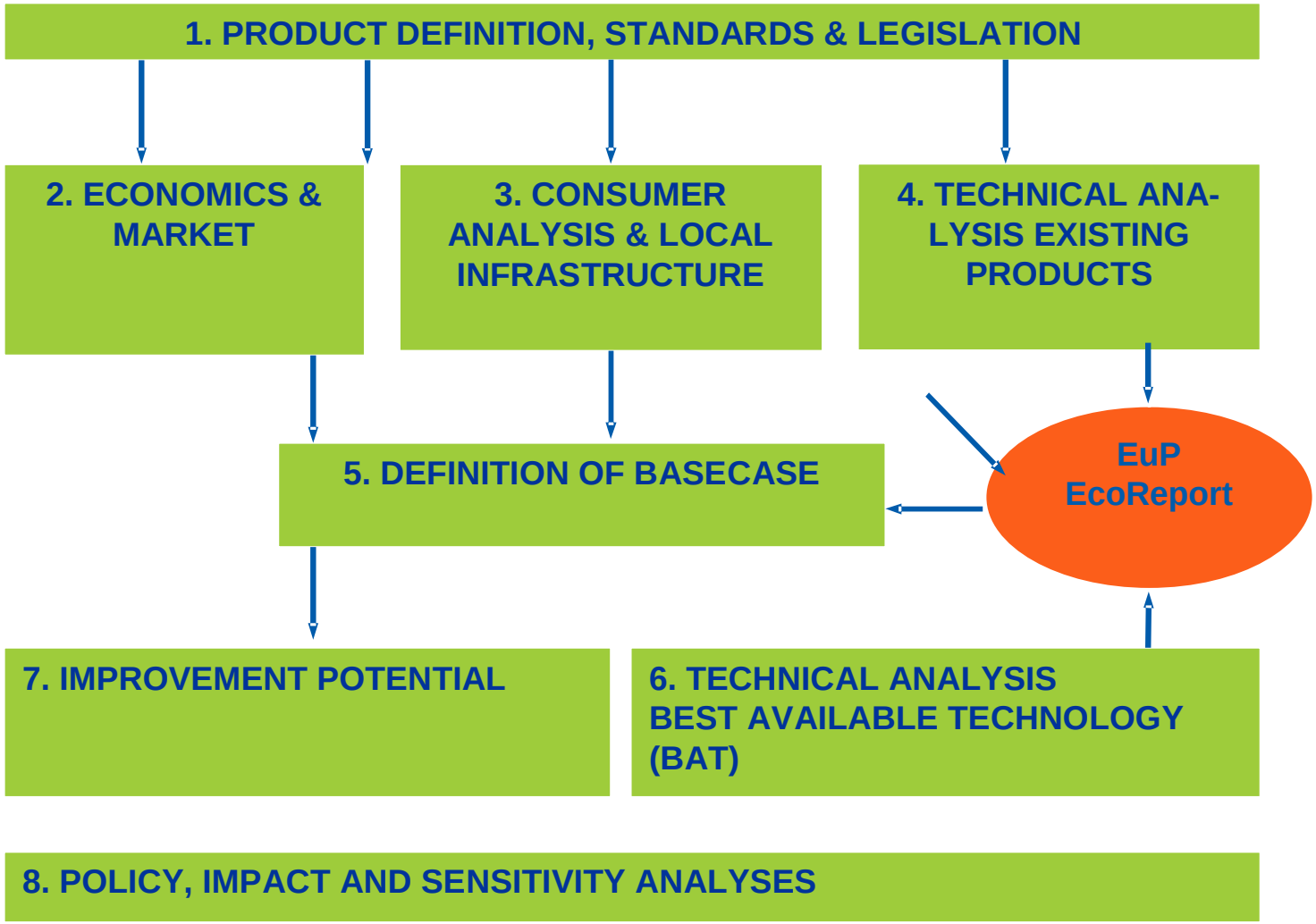
How is the Commission setting the requirements? – comitology procedure

- **Preparatory studies** : technical, environmental and economic analysis of product groups done by Consultant with input from stakeholders around the world (published on dedicated websites)
  - » Functionality of the product
  - » Health and safety
  - » Competitiveness of the industry
- **Consultation Forum**: discuss suggestions for ecodesign requirements (Commission)
- **Impact assessment and interservice consultation**
- **WTO notification** (Technical Barrier to Trade agreement)
- Vote in **Regulatory Committee** (EU Member States)
- **Scrutiny** of the European Parliament and Council
  - » PRAC, article 5(a) of Decision 1999/468/EC
  - » New comitology procedure of the Lisbon Treaty set out in Article 290
- **Adoption** by Commission: Regulations directly applicable in EU Member States

Methodology of Preparatory studies ("MEEuP")



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Impact of Ecodesign IM

Examples of adopted implementing measures:

Product	Reference	Estimated savings (annual by 2020)
Standby	OJ L 339, 18.12.08, p. 45	35 TWh
Simple set-top boxes	OJ L 36, 5.2.09, p. 8	6 TWh
Street & Office lighting	OJ L 76, 24.3.09, p. 17	38 TWh
External power supplies	OJ L 93, 7.4.09, p. 3	9 TWh
Domestic Lighting	OJ L 76, 7.4.09, p. 3	37 TWh

Total (125 TWh) à exceeds by 15 TWh the annual household electricity consumption of Portugal, Spain and Sweden combined

Ecodesign: current status (1)

- **Recently adopted measures (Regulations):**
  - » **Circulators, OJ L 191, 23.7.2009, p. 35–41**
  - » **Electric motors, OJ L 191, 23.7.2009, p. 26–34**
  - » **Household refrigerating appliances, OJ L 191, 23.7.2009, p. 53–68**
  - » **Televisions, OJ L 191, 23.7.2009, p. 42–52**
- **Measures under scrutiny:** domestic washing machines and dish washers
- **Other measures under preparation**: Boilers, Commercial refrigerators, Computers, Imaging equipment, Fans, Pumps, Room air-conditioners, Domestic fans, Complex set-top boxes, Laundry driers, Vacuum cleaners, Domestic lighting products II (reflector lamps and luminaires), Solid-fuel boilers, Transformers, Sound and Imaging Equipment, other Refrigerating & Freezing Equipment.
- **Other measures planned:** listed in Ecodesign Work Plan 2009-2011

Ecodesign: current status (2)

- Ecodesign Work Plan 2009-2011 COM(2008) 660
  - Air-conditioning and ventilation systems
  - Electric and fossil-fuelled heating equipment
  - Food-preparing equipment
  - Industrial and laboratory furnaces and ovens
  - Machine tools
  - Network, data processing and data storing equipment
  - Refrigerating and freezing equipment
  - Sound and imaging equipment
  - Transformers
  - Water-using equipment

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The Energy Labelling Directive 92/75/EC

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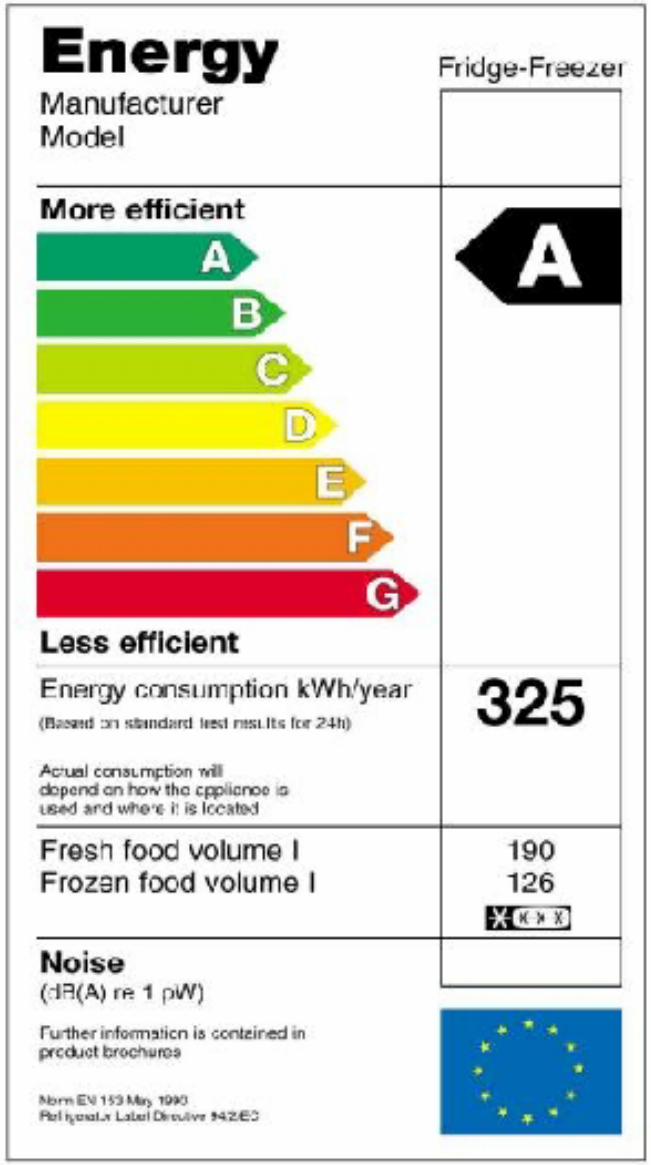
Current Energy Labelling Directive

- **Information requirements** on the consumption of energy and essential resources
- **Target: end-users** (public and private demand)
- Label design and layout decided in IMs
- Adoption procedure used to be similar to Ecodesign à with Lisbon Treaty in force no longer comitology but alternative consultation after adoption of recast



Recast of the Energy Labelling Directive

Main elements of the proposal (COM(2008) 778):

- Extension of the scope to
  - Non-household products (e.g. motors)
  - Energy-related products (as in the revised Ecodesign Directive)
- Fiscal incentives and public procurement
  - Tentative implementation of the SCP/SIP action plan
  - IPs to provide energy efficiency classes below which Member States should not set incentives and/or procure
- Simplification
  - Dedicated Acts in the format of Regulations instead of Directives
- Role for manufacturers, retailers as well as installers
- Political compromise reached on 17 November 2009, new elements:
  - design and layout of the label – A+++ introduced
  - public procurement and incentives - voluntary
  - energy efficiency class in advertisement – mandatory

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Integration of product labelling and ecodesign

Preparatory Study

Significant Environmental Impacts/life cycle (Including energy)	Best Available Technology (Worldwide)	Improvement Potential	Least Life Cycle cost	Measurement requirements leading to mandates etc)

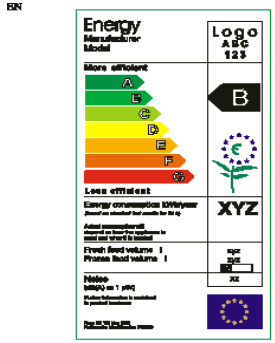
Specific Eco-Design Requirements

Maximum levels tolerated for "**CE**" marking

Eco-Label

top of the class

Energy Label



Voluntary Agreements

when ambitious compared with Business as usual and significant share of the market

EN Measurement Standards

Revision

§ **5-10** years depending on product group and progress of technology but staged requirements possible
§ **Dynamic** but predictable to encourage improvement products while providing clarity on investments for Industry
§ **Consistent** - Thresholds to be maintained (A becomes D etc.)
- Reward Development of 'good' products, compatibility of incentives

The state of play of several Ecodesign Lots

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Ecodesign Lot 11 fans (1)

- Scope: fans driven or designed to be driven by motors with an electric input power between 125 W and 500 kW, including those integrated in other products (fans and motor-fan subsystems).
- Exemptions (part 1):
  - » If outside temperature range
  - » Potentially explosive atmospheres
  - » Emergency use only (fire safety Directive)
  - » Toxic, highly corrosive or flammable environments
  - » Supply voltage > 1000 V AC or 1500 V DC
  - » Over 8000 rpm (vacuum cleaner)
  - » Ratio of discharge over suction pressure over 1.11
  - » Other technical characteristics? For example for
    - Laundry dryers? (fan or gas characteristics?)
    - Aircos?
    - Kitchen hoods?
    - …..?
  - » Roof and box fans? (to ENTR Ecodesign Lot 6? Fans inside are covered by the proposed Regulation anyway)
  - » What to do with fans in appliances covered by specific overall Ecodesign measures?

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Ecodesign Lot 11 fans (2)

- Exemptions (part 2):

  Already covered by the framework Ecodesign Directive:
  - » Article 1 (3): “This Directive shall not apply to means of transport for persons or goods.” This would exempt cars, trains and ships.

  An exemption on military applications may already be covered by the Lisbon Treaty (Articles 346-348).

  An exemption on nuclear applications may already be covered by the Treaty establishing the European Atomic Energy Community.

- The current interpretation is that if a fan is produced and sold and the manufacturer is not absolutely sure that the fan will not be used in other applications than covered by the exemptions in the Regulation itself or elsewhere, the requirements of the Ecodesign Regulation for fans have to be complied with.

Ecodesign Lot 15 fans (3)

- Ecodesign requirements: only electricity consumption
- Link with ISO 5801 and 12759
- Use of efficiency grades and target energy efficiency
- Mandate to be issued to CEN/CENELEC for energy efficiency
  issue:
  in situ testing for large fans?

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Ecodesign Lot 15 fans (4)

- Timetable for ecodesign requirements:
  - » Tier 1 from 1 July 2012
  - » Tier 2 from 1 January 2015

Issues:

- » Annex under development with exemptions from Tier 1 for redesigning appliances.
  Input has been requested from European organisations of appliance manufacturers
- » Spare parts and stock ("placing on the market")

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Ecodesign Lot 15 fans (5)

- Product information requirement from 1 July 2012 for manufacturers of fans and of products with integrated fans:
  - » Technical documentation of fans (for MS)
  - » Free access websites
- Information plate on or near the fan, including info on overall efficiency, efficiency grade and use of VSD
- Information should also cover installing, using and maintaining the fan

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Ecodesign Lot 15 fans (6)

- Efficiency calculation
  - » Fan as final assembly
  - » Fan as not final assembly
  - » Default value if not supplied with motor
- Provisions for fans with VSD

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Ecodesign Lot 15 fans (7)

- Market surveillance: overall efficiency of the fan should be at least target efficiency x 0.9
- Provision for fans produced in very low quantities

- Market surveillance is for Member States' authorities
  - » Check of documentation
  - » Testing
- They can use specialised labs for testing
- Role for Commission if market surveillance is wanting
- Industry can inform where appropriate.
- Issue: role for Notified Bodies ?

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Ecodesign Lot 15 fans (8)

- Other Ecodesign legislation coming:
  - » ENTR Lot 6 on airco and ventilation systems
  - » ENER Lot 21 on hot air based central heating systems
  - » ENER Lot 10 on residential aircos, comfort fans and possibly kitchen hoods

  - » ENER Lot 1 on boilers (including heat pumps)
  - » ENER Lot 16 on laundry dryers
  - » ENER Lot 17 on vacuum cleaners

- Issue: initiative for fans below 125 W needed?

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Ecodesign Lot 11 fans (9)

Timeline

- February 2008 : Preparatory study: draft completed
- 27 May 2008 : 1st Consultation Forum meeting with Member States and stakeholders
- June 2009 : Impact assessment draft completed
- December 2009 : Launch of Inter Service Consultation
- 26 March 2010 : 2nd Consultation Forum meeting with Member States and stakeholders
- 30 April 2010 : Deadline for comments
- 11 June 2010 : Regulatory Committee meeting (vote)
- From June 2010 : Scrutiny by European Parliament
- October 2010 : Publication in Official Journal

- 2013 - 2014 : Indicative start of review process

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EPBD recast and Ecodesign

- Certification of buildings in cases of “transactions”
- Inspection of heating (boilers > 20 kW) and airco systems (> 12 kW)
- No longer 1000 m² criterion for renovation
- All new buildings to be nearly zero buildings by end 2020
- Financial incentives
- MS can not ban products allowed under Ecodesign IMs, but they can go beyond Ecodesign thresholds in building codes
- Examples that authorities in Member States are aware of ventilation needs and efficiency impacts of miniaturisation

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More information available on:

DG Energy

- http://ec.europa.eu/energy/efficiency/ecodesign/eco_design_en.htm
- http://www.ecomotors.org
- Email: tren-ecodesign@ec.europa.eu

DG Enterprise and Industry

- http://ec.europa.eu/enterprise/eco_design/index_en.htm
- Email: entr-ecodesign@ec.europa.eu

Energy Star

- http://www.eu-energystar.org/

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New Ecodesign legislation for fans

Thank you for your attention !

Email: wilhelmus.de-wilt@ec.europa.eu

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